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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/091,300	06/16/1998	WOLFGANG VON DEYN	5000-0103PUS1	4798

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
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HAVLIN, ROBERT H

ART UNIT	PAPER NUMBER
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1626

NOTIFICATION DATE	DELIVERY MODE
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11/24/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 09/091,300	<b>Applicant(s)</b> VON DEYN ET AL.	
	<b>Examiner</b> ROBERT HAVLIN	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17, 18, 21-23, 28-31 and 34-52 is/are pending in the application.
- 4a) Of the above claim(s) 17, 18, 22, 23, 31, 34, 38-46, 49 and 52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21, 28-30, 35-37, 47, 48, 50 and 51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

**RCE:** A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/29/10 has been entered.

**Status of the claims:** Claims 17, 18, 21-23, 28-31, and 34-52 are currently pending.

**Priority:** This application is a 371 of PCT/EP98/00069 (01/08/1998) and claims foreign priority to GERMANY 197 01 446.1 (01/17/1997). A certified copy of the foreign priority document is now of record (filed 5/19/2010).

### ***Election/Restrictions***

1. During a telephone conversation with Andrew Meikel on 4/14/09 a provisional election was made with traverse to prosecute the invention of the products, claims 18, 20, 21, 28-31, and 34-52.
2. Applicant's affirmation of the election with traverse of Group I (Claims 18, 20, 21, 28-31, and 34-52, drawn to products) in the reply filed on 9/3/09 is acknowledged. The traversal is on the ground(s) that there would not be an undue burden on the examiner. This is not found persuasive because, in addition to the reasons provided in the prior office action, the examination of the groups together would require multiple searches.
3. Applicant also elected the species of claim 30 (reading on claims 21, 28-30, 35-37, 47, 48, 50, 51) having the following structure:

4. Claims 18 and 49 were rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for compounds identified as readily recognizable as those “radical[s] which can be removed by hydrolysis,” does not reasonably provide enablement for the entirety of the claim scope. The specification does not enable any

person skilled in the art to which it pertains to use the invention commensurate in scope with these claims.

Applicant has deleted the language, thus this rejection is **withdrawn**.

## **NEW CLAIM REJECTIONS**

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

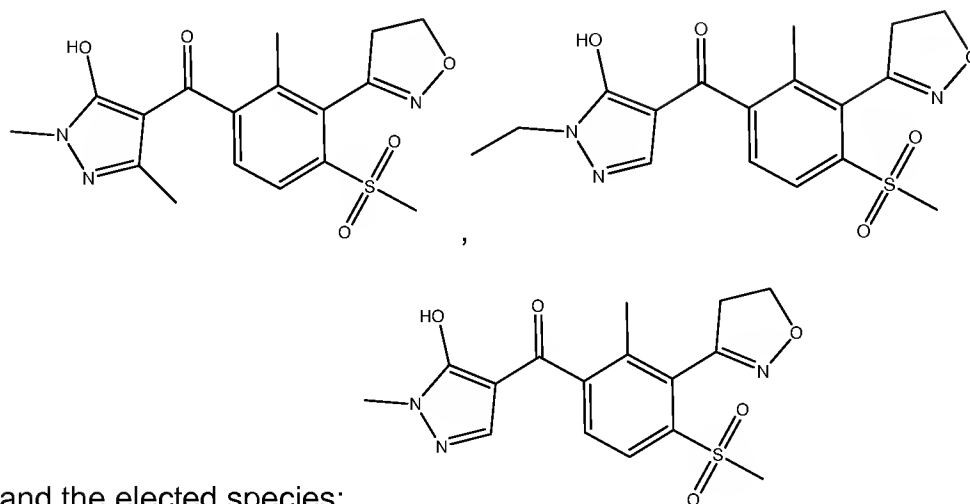
6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 21, 28-30, 35-37, 47, 48, 50, 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Von Deyn et al. (WO96/26206 [English equivalent US 5,846,907]) in view of Silverman, R. B. (The Org. Chem. of Drug Design and Drug Action, Academic Press, Inc.: San Diego, 1992, pp. 4-51).

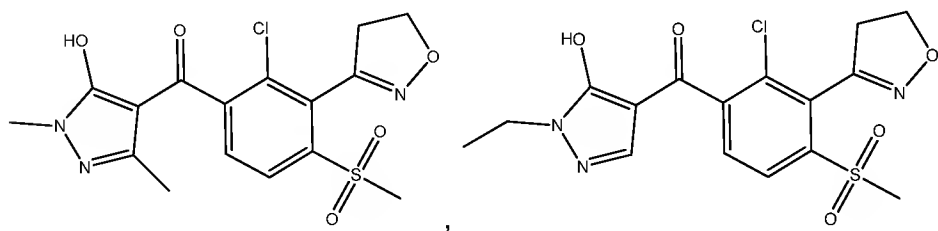
The instant claims read on the following compounds:

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1. Determining the scope and contents of the prior art.

Von Deyn teaches the following compounds as herbicides (page 40 compounds 5.4 and 5.5):



The reference also teaches a genus of compounds that reads on the instantly elected species.

Silverman teaches the methodologies routinely employed in discovering new chemical agents. Specifically, on page 19, table 2.2 Silverman describes classical isosteres which are expected to have similar activity following such a substitution, i.e. Cl to Me would be expected to maintain activity. In addition, Silverman teaches on pages 16-17 alkyl homologation where alkyl groups of varying chain lengths are shown to possess similar activity while having varying degrees of solubility.

2. Ascertaining the differences between the prior art and the claims at issue.

The claims of Von Deyn read on the elected species. Compounds 5.4 and 5.5 differ from the instant claim scope by a chloro to methyl substitution on the phenyl ring.

3. Resolving the level of ordinary skill in the pertinent art.

One of ordinary skill in the art of herbicide or pharmaceutical development would be well versed in the teachings of references such as Silverman. One of ordinary skill in the art would consider routine and well within their technical grasp the process of altering the substituents on molecules and screen them for activity on a large scale to improve potency. Furthermore, one of skill in the art would know that classical isosteres of any given active compound likely shares the same activity.

4. *Considering objective evidence present in the application indicating obviousness or nonobviousness.*

The record does not contain any evidence of secondary considerations.

One of ordinary skill in the art would be motivated to optimize the activity of the compounds identified by Van Deyn and perform the methods of isosteric replacement and QSAR. Based on the teachings of Silverman, one of ordinary skill in the art would be motivated to alter the substitution on the phenyl group to produce a more active compound. One of ordinary skill in the art would also be motivated to alter the solubility of the compound by performing alkyl homologation on the alkyl groups in the compound including the methyl group of the pyrazole ring.

In Eisai Co. Ltd. v. Dr. Reddy's Laboratories Ltd., 87 USPQ2d 1452, 1454 (Fed.

Cir. 2008), the Federal Circuit clarified the proof of obviousness in structural similarity situations such as this:

Where, as here, the patent at issue claims a chemical compound, the analysis of the third Graham factor (the differences between the claimed invention and the prior art) often turns on the structural similarities and differences between the claimed compound and the prior art compounds. See *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1377 [81 USPQ2d 1324] (Fed. Cir. 2006) (noting that, for a chemical compound, a prima facie case of obviousness requires “structural similarity between claimed and prior art subject matter ... where the prior art gives reason or motivation to make the claimed compositions” (quoting *In re Dillon*, 919 F.2d 688, 692 (Fed. Cir. 1990) (en banc))). Obviousness based on structural similarity thus can be proved by identification of some motivation that would have led one of ordinary skill in the art to select and then modify a known compound (i.e. a lead compound) in a particular way to achieve the claimed compound. See *Takeda Chem. Indus. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1356 [83 USPQ2d 1169] (Fed. Cir. 2007). In keeping with the flexible nature of the obviousness inquiry, *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 [82 USPQ2d 1385] (2007), the requisite motivation can come from any number of sources and need not necessarily be explicit in the art. See *Aventis Pharma Deutschland GmbH v. Lupin, Ltd.*, 499 F.3d 1293, 1301 [84 USPQ2d 1198] (Fed. Cir. 2007). Rather “it is sufficient to show that the claimed and prior art compounds possess a ‘sufficiently close relationship ... to create an expectation,’ in light of the totality of the prior art, that the new compound will have ‘similar properties’ to the old.” *Id.* (quoting *Dillon*, 919 F.2d at 692).

In this case, the prior art and the instant claims possess a significantly close structural relationship such that one of ordinary skill in the art would have an expectation that the prior art and the new compound will have similar properties. In fact, the prior art teaches a genus of compounds with the identical utility of the instant claims that encompasses the elected species and much of the instant claim scope. Thus, one of ordinary skill in the art would have a strong motivation and suggestion that the structurally similar compounds of the instant claims would possess the same utility as described in the prior art. This is also supported by the “classical isosterism” described in *Silverman* wherein Cl and Me are known to be interchangeable or the alkyl



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homologation of altering a methyl group to an ethyl group. Therefore, one of ordinary skill in the art would conclude that the instantly claimed compound would possess similar activity as the prior art and this would be predictable based on the knowledge and experience of those of ordinary skill in the art and the teachings of the prior art as a whole.

Therefore, **the claims are rejected.**

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory

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double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 21, 28-30, 35-37, 47, 48, 50, 51 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 5,846,907 in view of Silverman, R. B. (The Org. Chem. of Drug Design and Drug Action, Academic Press, Inc.: San Diego, 1992, pp. 4-51). The obviousness rejection supra forms the basis for this rejection.

### ***Conclusion***

The claims are not in condition for allowance.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HAVLIN whose telephone number is (571)272-9066. The examiner can normally be reached on Mon. - Fri., 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Joe McKane can be reached at (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Havlin/  
Primary Examiner, Art Unit 1626